

Geometry 1.5 Study Guide: Using Formulas in Geometry (pp 36-37)

I can apply formulas for perimeter, area, and circumference.

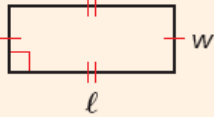
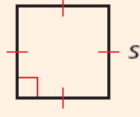
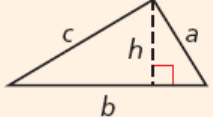
Common Core

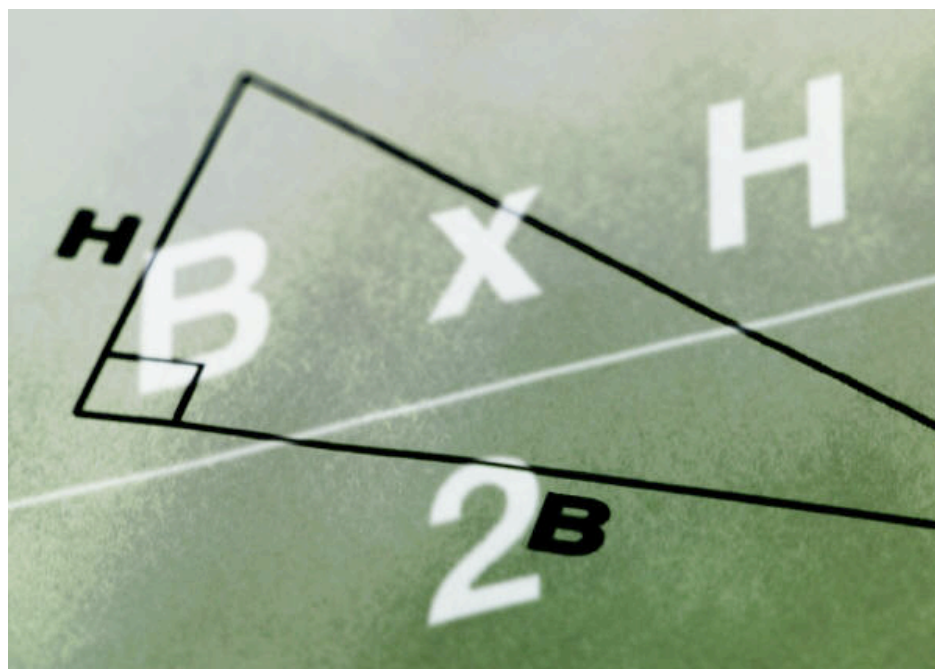
CC.9-12.A.SSE.1 Interpret expressions that represent a quantity in terms of its context.*

CC.9-12.A.CED.4 Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations.

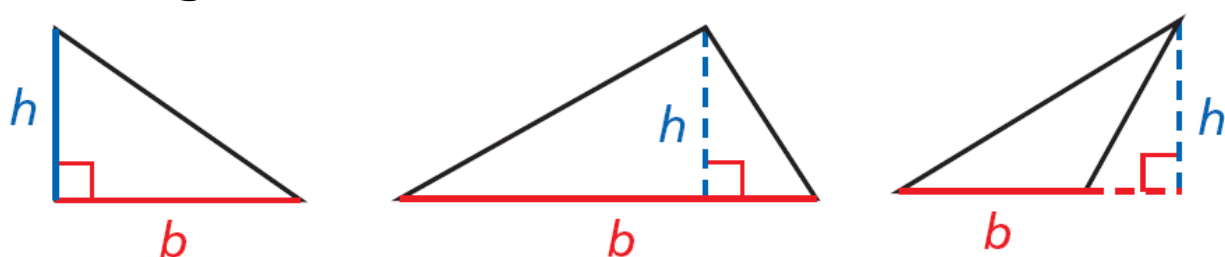
1. Compare and contrast perimeter and area.

Perimeter and Area

RECTANGLE	SQUARE	TRIANGLE
 $P = 2\ell + 2w$ or $2(\ell + w)$ $A = \ell w$	 $P = 4s$ $A = s^2$	 $P = a + b + c$ $A = \frac{1}{2}bh$ or $\frac{bh}{2}$



The **base** b can be any side of a triangle. The **height** h is a segment from a vertex that forms a right angle with a line containing the base. The height may be a side of the triangle or in the interior or the exterior of the triangle.

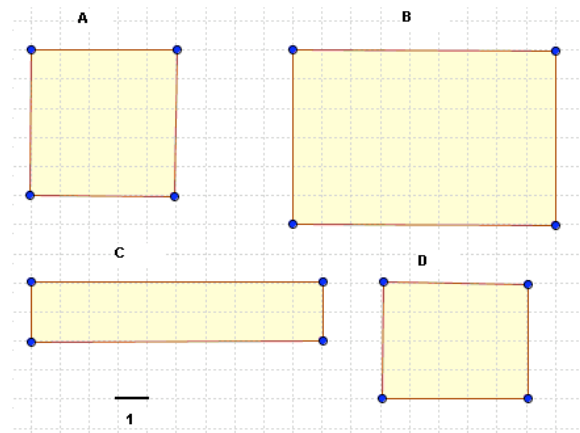


Remember!

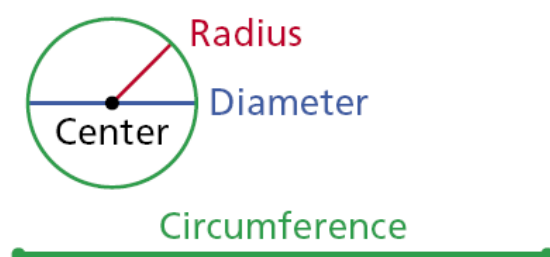
Perimeter is expressed in linear units, such as inches (in.) or meters (m). Area is expressed in square units, such as square centimeters (cm^2).

Refer to example 1 on page 36.

Refer to example 2 on page 37.



In a circle a **diameter** is a segment that passes through the center of the circle and whose endpoints are on a circle. A **radius** of a circle is a segment whose endpoints are the center of the circle and a point on the circle. The **circumference** of a circle is the distance around the circle.



Circumference and Area of a Circle

The circumference C of a circle is given by the formula $C = \pi d$ or $C = 2\pi r$.

The area A of a circle is given by the formula $A = \pi r^2$.

The ratio of a circle's circumference to its diameter is the same for all circles. This ratio is represented by the Greek letter π (pi). The value of π is irrational. Pi is often approximated as 3.14 or $\frac{22}{7}$.

Refer to example 3 on page 37.

1.5 Assignment (p 38-40) 10, 14, 24, 34, 36, 38, 42.